

CLAIMS:

1. A pressure development apparatus comprising:
a pressure roller having a roller width which is at least
approximately equal to a media width of media to be developed, said pressure
5 roller being adapted to apply a pressure onto a surface of media to be developed;
and
at least one block-like member mounted on top of said pressure
roller, said block-like member having at least one curved section adjacent to an
outer circumference of said pressure roller which matches a curvature of said
10 pressure roller and partially surrounds the outer circumference of the pressure
roller.
2. A pressure development apparatus according to claim 1, further
comprising:
15 a backing member located on an opposing side of said pressure
roller such that a nip portion for media to be developed is defined between said
pressure roller and said backing member;
wherein a force applied to said at least one block-like member is
transferred to said pressure roller to apply the pressure to the media at said nip
20 portion and cause a development of said media.
3. A pressure development apparatus according to claim 1,
wherein said pressure roller is rotatable relative to said block-like member.
- 25 4. A pressure development apparatus according to claim 1,
wherein said block-like member is a single block like member which
approximately matches the roller width of said pressure roller to prevent a
deflection of said pressure roller in a width-wise direction and equalize the
pressure applied by said pressure roller in said width-wise direction.
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5. A pressure development apparatus according to claim 1,
comprising a plurality of said block-like members provided in a spaced manner in

a width-wise direction of said pressure roller to prevent a deflection of said pressure roller in the width-wise direction and equalize the pressure applied by said pressure roller in the width-wise direction.

5 6. A pressure development apparatus according to claim 1, further comprising at least one bearing member provided between said pressure roller and said curved section of said block-like member.

10 7. A pressure development apparatus according to claim 1, comprising at least two of said pressure rollers provided one behind the other with respect to a direction of travel of media to be developed, said block-like member comprising at least two of said curved sections which respectively match an outer circumference of each of said at least two pressure rollers.

15 8. A pressure development apparatus according to claim 7, wherein each of said at least two pressure rollers comprises ring like members which completely surround each of said pressure rollers and are provided in a spaced manner along a width-wise direction of said pressure rollers.

20 9. A pressure development apparatus according to claim 8, wherein said at least two pressure rollers are positioned in an off-set manner in said width-wise direction so that the ring-like members on one of the at least two pressure rollers are off-set from the ring-like members on the other of said at least two pressure rollers.

25 10. A pressure development apparatus according to claim 7, wherein each of said at least two pressure rollers comprises protruding round members which are provided at distinct locations around a circumference of each of said at least two pressure rollers.

30 11. A pressure development apparatus according to claim 10, wherein said at least two pressure rollers are positioned in an off-set manner in

said width-wise direction so that the protruding round members on one of the at least two pressure rollers are off-set from the protruding round members on the other of said at least two pressure rollers.

- 5 12. A pressure development method comprising the steps of:
 exposing a photosensitive medium comprising a plurality of
microcapsules which encapsulate imaging material to form a latent image;
 passing the photosensitive medium between a nip portion defined
by at least one pressure roller and a backing member; and
10 developing said photosensitive medium by applying pressure on a
surface of said photosensitive medium by applying a force onto a block-like
member located above said pressure roller which is transferred to said pressure
roller, said pressure being sufficient to rupture selected microcapsules to release
imaging material, said block-like member having at least one curved portion
15 which matches a curvature of said at least one pressure roller and partially
surrounds the at least one pressure roller.

13. A method according to claim 12, wherein said block-like
member is a single block like member which approximately matches a roller
20 width of said pressure roller to prevent a deflection of said pressure roller in a
width-wise direction and equalize the pressure applied by said pressure roller in
said width-wise direction.

14. A method according to claim 12, comprising a plurality of said
25 block-like members provided in a spaced manner in a width-wise direction of said
pressure roller to prevent a deflection of said pressure roller in a width-wise
direction and equalize a pressure applied by said pressure roller in the width-wise
direction.

- 30 15. A pressure development apparatus comprising:
 a first roller having a roller width which is at least approximately
equal to a media width of media to be developed, said first roller having a first

diameter and being adapted to apply pressure onto a surface of media to be developed; and

5 a second roller located above said first roller and having a second diameter which is greater than the first diameter of said first roller, said second roller being adapted to equalize the pressure applied by the first roller in a width-wise direction and prevent a deflection of said first roller in said width-wise direction.

10 16. A pressure development apparatus according to claim 15, further comprising:

a backing member located on an opposing side of said first pressure roller such that a nip portion for media to be developed is defined between said first pressure roller and said backing member;

15 wherein a force applied to said second roller is transferred to said first roller to apply the pressure to the media at said nip portion and cause a development of said media.

20 17. A pressure development apparatus according to claim 16, wherein said backing member comprises a single backing roller.

25 18. A pressure development apparatus according to claim 16, wherein said backing member comprises a first small diameter backing roller which forms the nip portion with said first roller and a second larger diameter backing roller mounted adjacent to the first smaller diameter backing roller.

30 19. A pressure development apparatus comprising:
a pressure roller having a roller width which is at least approximately equal to a media width of media to be developed, said pressure roller being adapted to apply a pressure onto a surface of media to be developed;

a first block-like member mounted on top of said pressure roller, said first block-like member having a first curved section adjacent to an outer

circumference of said pressure roller which matches a curvature of said pressure roller and partially surrounds the outer circumference of the pressure roller;

a backing roller which forms a nip portion with said pressure roller for a passage of media to be developed there-between; and

5 a second block-like member mounted adjacent to said backing roller, said second block-like member having a second curved section adjacent to an outer circumference of said backing roller which matches a curvature of said backing roller and partially surrounds the outer circumference of the backing roller.

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20. A pressure development apparatus according to claim 19, wherein said first block like member is adapted to prevent a deflection of said pressure roller in a width-wise direction of said pressure roller, and said second block member is adapted to prevent a deflection of said backing roller in a width-
15 wise direction of said backing roller.

21. A pressure development apparatus comprising:

a pressure roller having a roller width which is at least approximately equal to a media width of media to be developed, said pressure
20 roller being adapted to apply a pressure onto a surface of media to be developed; and

at least one block-like member mounted on top of said pressure roller, said block-like member being adapted to provide a force on said pressure roller and prevent a lateral deflection of said pressure roller.

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22. A pressure development method comprising the steps of:

exposing a photosensitive medium comprising a plurality of microcapsules which encapsulate imaging material to form a latent image;
passing the photosensitive medium between a nip portion defined
30 by at least one pressure roller and a backing member; and
developing said photosensitive medium by applying pressure on a surface of said photosensitive medium by applying a force onto a block-like

member located above said pressure roller which is transferred to said pressure roller, said pressure being sufficient to rupture selected microcapsules to release imaging material, said block-like member being adapted to prevent a lateral deflection of said pressure roller.

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